THE EVENING WORLD'S RADIO PHONE SERVICE COLUMN

M'drew Ferry.—'Will you kindly ten me the range of the receiving set pub-lished in The Evening World, using a WDII tube rheostat, dry cell battery, a loose coupler, a variable condenser, phones and 'B' battery? What could I ume in place of the loose coupler to in-orease my receiving range."' Answer— The set referred to uses a vario coupler The set referred to uses a vario coupler instead of a loose coupler and under normal conditions has a dependable receiving radius of 150 miles; that is, providing the set is not acreened by steel structures or other highly conductive beliums which absorb the weak signals and weaken the powerful signals. When you speak of increasing your receiving represent of you refer to distance ceiving range do you refer to distance or stations of higher wave lengths. To get stations that are over two hundred miles away with any degree of regu larity a step of radio frequency will be necessary, whereas the reception of sta-tions of higher wave length can be acplished by loading the colis.

Wm. Schultz-"Will you kindly advise me how to connect one step of rdio frequency amplification to the at-ched hook-up? Would a potentio-meter improve my reception? Where and how should it be connected? Will a WDII tube give as good results as a UV2017 How many volts should be used on the plate of a WD11?" Answer The hook-up wanted by you will be found in the City Edition of The Evening World of Sept. 29, 1922. A potentiometer will improve your reception by eliminating a lot of the battery nolses and interferences. The potentiometer effects a perfect balance between the Blament and plate circuits. It should be connected across the "A" battery and the movable contact attached to the negative side—the "B" battery giving eightee, volts. The WDII, according to the manufacturers, is a hard tube are can be used in place of the LY201 in any continue circuit. It gives UV201 in any receiving circuit. It gives as good results as the 201 tube. This type of tube will take anything up to 100 olts on the plate. It functions, how ver, on about 22% volts.

Reader "What are the values in crofarads and meschans of the grid condensers and grid leak for a UV201 the in a single tube regenerative set wer—A grid condenser of .00825 rofareds or .0095 microfareds in ngeable cartridge form can be bought and used for varying weather condi-tions. The grid leak should be variable and have a range of from \(\frac{1}{2} \) megohns. This leak will give all the necessary variations for weather conditions; so the receiving instrument can always be relied upon to give the best results. An article by M. U. Wal-the, published in The Evening World Aug. 17, gives the results of experiments along these lines.

P. Thompson—"Will you kindly cettle dispute as to who discovered wireless? says it was Marconi and II says A says it was Marconi and it says thertz." Answer—There are about five distinguished scientists who claim that distinction, and until they settle among themselves the question of defaitely placing the laurels we prefer to remain stient. In The Evening World of Aug. 7, 8 and 5 you will find a chronological table of ratio development to which we ble of radio development to which w spectfully refer you

G. E .- "Will you kindly tell me who wrong with the inclosed hook-up detector and three-step outfit. I ge nod results using the phones jacked is



Race Horse Auto Has uled Radio Antenna isting Ningara's Boni te Radio Receiving Sei interference' Contest Ar centent—\$100.00 in Frizes
e Your Own Radio Movies
Turing Devices and CirRadio Broadcasting Sta
Flotes, Radio Broadcastf Latest Radiophone Broad
g Stations and Call Letterfor the Beginner—10th in
neut. Radio Oracle (Quesand Answers)

the December Issue of Cience and Invention

NOW ON All NEWS STANDS



By Capt. Robert Scofield Wood. when the last step is cut in when the last step is cut in the inter-ference is so great that it epoils the re-ception altogether. How can this be avoided and what causes it? I have been all over the set and everything seems to be all right." Answer—Three tubes of amplification cannot be used with any degree of success because the internal noises developed in the tubes themselves become greater than the strength of the signals. Stick to the Questions and Answers. Ardrew Perry-"Will you kindly tell two-steps and forget about the third step or change it into a step of radio frequency.

WOR-NEWARK.

2.30 P. M .- Song recital by William D. Connolly of the Singers' Club of New York. 2.40 P. M. - Selections by 2.50 P. M. — "Ten Minutes With Matty." Christy Mathewson on "The Value of Health."

3.00 P. M. - Songs by William D. 3.15 P. M .- "Little Journeys to the omes of the Great' by Elbert ubbard. The journey will be to the ome of Samuel T. Coleridge. Hubbard. 3.45 P. M.—Selections for harp riolin and plane by Clara Auwell, Jessi E. Koewing and Louise Egner. 6.15 P. M.—Santa Claus Hour. "Experiences During the Day in Toyland." 6,30 P. M.—"Man in the Moon Stories

for the Children." 6.55 to 7.55 P. M.—Weekly Release of

WEAF-NEW YORK. 400 METRES.

4.30 P. M .- Recital by Edith Traud. 4.45 P. M .- Clarinet solos by John De Buerls, accompanied by A. V. Liufrio. -5 P. M.—Recital by Edith Trauh, col-7.30 P. M .- Imitations of birds by Ed- c

ward Avis, accompanied on violin by 7.50 P. M .- Plano recital by Helen Jelkut. 8 P. M.—"The Story of the Little Glass Silpper," by Gimbel Brothers, New

8.10 P. M.-Recital by Frances Baiello, soprano, and Ferdinand Zegel, enor, secompanied by Clifford Vaughan, 8,40 P. M. — Violin soles by Cecile 8.55 P. M.—Plano recital by Helon

9.15 P. M.—Joint recital by Frances Baviello, soprano, and Ferdinand Zegel tenor. 9.45 P. M.-Violin solos by Cecile

WGY-SCHENECTADY,

12.00 M .- United States Naval Obse vatory time signals. 12.30 P. M.—Noon stock market qu 12.45 P. M .- Weather forecast on 485

6.00 P. M .- Produce and stock market uotations; news bulletins. 6.30 P. M.—Reading from Grimm Fairy Tales, Kolin Hager, reader.
7,40 P. M.—Health Talk, "Keep Your
Mind Well," Col. Homer Folks, Secretary New York State Charities Aid

ews flashes; early sports news. 9.30 P. M.—Evening program of talks Association.
7.45 P. M.—Radio drama and con

WJZ-NEWARK 360 METRES.

5.30 P. M.-Closing prices on stocks bonds, grain, coffee and sugar.
5.35 P. M.—"Two Stories," copyrighted by the Youth's Companion. 5.45 P. M .- Conditions of leading in

7.15 P. M .- "American Bred Dogs," by Frank Dole. 7.30 P. M.-Recital by Abracha Ko

Askowith of the Independent.

9 P. M.—Literary evening, conducted by the editorial staffs of the Outlook. Scientific American and Harper & Bros. 9.15 P. M.—Recital by Fred Crom-WAR MEDAL TO COL. CLARK.

10.01 P. M .- Musical program.

9.30 A. M.-Musical program,

WGI-MEDFORD HILLSIDE.

7.00 A. M.—Before breakfast set-ups, y Arthur E. Baird. *

10.30 A. M.—New England and ocean precast, United States Weather Bureru

11.30 A. M.-Music on mechanical

1.50 P. M.-Boston farmers' produce

market reports; United States official weather forecast (485 metres).

2.00 P. M.—Modern Priscilla talks to housewives, "School and Business Lunches;" "Food Flavors and Savors."

Miss Goodwin, Department of Agricul-

3.00 P. M.-Midafternoon nerrs; mu-

sical program, 6.00 P. M.—Market reports. 6.30 P. M.—Boston police reports; late

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WASHINGTON, Dec. 7,-Lieut. Col 9.46 P. M.—Recital by Frederick Cromweed, planist, of the Bronx. 9.55 to 10 P. M.—Arlington time sig-Stephen S. Clark of No. 46 East 70th Street, New York, has been awarded the Distinguished Service Medal "for exceptionally meritorious and distinguished service" in administration work with the 2d Army Corps, according to the citation issued by the War

Department to-day.

Citations for gallantry in action were announced to-day for Sergia. George W. Stewart of Rahway, N. J., and Stanley A. Todd of Filsabeth, N. J., both of Company C, 104th Field Signal Rattalion, 29th Division. The decorations are for "gallantry in action near Bols De Consenvoye, France, Oct. 12-14, 1918." Stewart and Todd while under heavy bombardment of artillery courageously continued to lay wires and and continue communication between the front line battalion and regimental headquarters of the 113th Infantry.

IN NEW YORK TO-DAY.

High School of Commerce Alumni Association, dance, Pennsylvania, evening Tobacco Salesmen's Association, meet-

dance, Pennsylvania, 3 P. M. Virginia Claim Conference Pennsylvania, 10 A. M. The Hydraulic Society, meeting, Penn-

sylvania, 10 A. M. Sigma Phi Alpha Sorority, dance, Biltmore, 5 P. M. Women's Metropolitan Golf Associa-tion, meeting, Hitmore, 10 A. M. Association of Life Insurance Presidents, convention-luncheon, Astor, 10

National Association of Credit Men. Drama Comedy, social matinee, Aster.

American Society of Mechanical En-

gineers, dinner-dance, Astor, evening.
Junior Aid Lesgue of Lenox Hill Hospital, dance, Astor, evening.
Radiant Leoige, No. 783, F. and A. M.,
lance, Astor, evening.
College of Oral and Dental Surgery,
lance, Astor, evening. dance, Astor, evening.

National Society, United States Daughters of 1812, meeting, Waldorf-Astoria, 11 A. M.

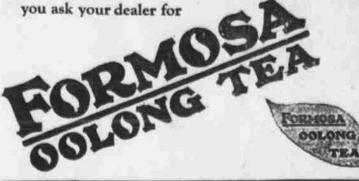
St. Mark's on the Bouwerie, St. Nich-

olastide celebration, at the parish house, afternoon and evening. The Virginians, annual dinner-dance, Plaza, evening. United Neighborhood Houses, mage sule, No. 742 Eighth Avenue.

gramman The Amas Gift Stores management

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lustries, by R. D. Wycoff of the Maga-line of Wall Street. 5.50 P. M.—Resume of sporting

6 P. M.—Musical program.
7 P. M.—"Bedtime Stories," by Thorn

5 P. M.—Recital by Edith Traun, col-oratura soprano.
5.15 P. M.—Clarinet solos by John
De Buerls.

8.30 P. M.—Fashion," by an editor of Harper's Bazaar.

8.45 P. M.—Concert by Erna Pielka,

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\$96); Four-Passenger Coupe, \$1235; Sedan, \$1335.

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